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Memo

To: South Carolina Climate, Energy and Commerce Advisory Committee

From: The Center for Climate Strategies

CC: Executive Office of South Carolina Governor Mark Sanford
Chairman, the Honorable Representative Ben Hagood, South Carolina Senate
South Carolina Department of Health and Environmental Control; South Carolina
Department of Natural Resources

Subject: Preparation for the Third Meeting of the South Carolina Climate, Energy and
Commerce Advisory Committee on August 22, 2007

Date: August 17, 2007

At our third meeting of the South Carolina Climate, Energy and Commerce Advisory Committee (CECAC) on Wednesday, August 22, 2007, the CECAC will review and approve of suggested draft “priority for analysis” policy options by the Technical Work Groups (TWGs), with modifications as needed. Time permitting, we will also discuss ongoing updates to the draft South Carolina greenhouse gas (GHG) emissions inventory and forecast. Based on these decisions by the CECAC, the TWGs will begin work on straw proposals on initial policy design parameters for future development and quantification of draft policy options.

As preparation for our meeting, please review the attached lists of TWG suggested draft policy option “priorities for analysis” and other background documents posted to the project website at: www.scclimatechange.us. Please note that the CCS project website was out of service earlier this week due to damage by hackers, but should now be in working order.

In terms of overall progress, the CECAC has completed key milestones since its launch, including:

- Identification of a full range of potential South Carolina options for mitigation of GHG emissions, including over 250 possible state actions.
 - TWG identification, by informal balloting, of 52 initial priorities for analysis of draft policy options.
 - Completion of the initial statewide inventory and forecast of GHG emissions and start of the review process.
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The next stages of the CECAC process will include completion of the following milestones:

- Approval of a full range of draft initial priorities for analysis of policy options at our third meeting today.
- Formulation of “straw proposals” for the design (timing, levels, coverage) of these initial draft policy options for consideration by the CECAC at its fourth meeting.
- Completion of the first round of economic analysis of draft policy options by CCS, and identification of early consensus recommendations at our fifth meeting.
- Review and revision of policy option design, analysis, and draft options as needed during TWG calls and meetings.
- Final approval of remaining CECAC policy option recommendations at our sixth meeting.
- Final approval of the statewide inventory and forecast of GHG emissions by the final meeting.

Summary of CECAC Progress and Next Steps:

Status of Draft Policy Options	
Original Number of Potential Options Presented to the CECAC from the CCS Catalog of State Actions	208
Updated Number of Potential Options on the CCS Catalog of States Actions, Including CECAC Additions	254
Current Number of Draft Potential Priority Policy Options for Analysis	52
• Residential, Commercial, and Industrial	12
• Energy Supply	10
• Transportation and Land Use	13
• Agriculture, Forestry and Waste	9
• Cross Cutting Issues	8
Next Steps	
Approve Straw Proposals for Draft Policy Option Design	CECAC Meeting #4
Present First Round of Analysis of Draft Policy Options and Identify Early Consensus Recommendations	CECAC Meeting #5
Approve Final CECAC Policy Option Recommendations	CECAC Meeting #6

**Table 1.
 Residential, Commercial, and Industrial Technical Work Group
 Summary List of Recommended Priority Policy Options for Analysis**

Proposed Option #	Proposed Option Name	# From Catalog of State Actions
RCI-1	Demand-Side Management (DSM)/Energy Efficiency Programs, Funds, or Goals for Electricity (including expansion of same) (Residential, Commercial, and Industrial)	1.1 (Demand-Side Management (DSM)/Energy Efficiency Programs, Funds, or Goals for Electricity (including expansion of same) for 1.1a - Residential, 1.1b - Commercial, 1.1c - Industrial)
RCI -2	Demand-Side Management (DSM) Energy Efficiency Programs, Funds, or Goals for Natural Gas, Propane, and Fuel Oil	1.2 (Demand-Side Management (DSM) Energy Efficiency Programs, Funds, or Goals for Natural Gas, Propane, and Fuel Oil)
RCI -3	Incentives and Regulatory Reform (including net-metering) to Promote Implementation of Renewable Energy Systems, Including PV (Residential, Commercial, and Industrial)	6.1 (Incentives to Promote Implementation of Renewable Energy Systems, Including PV for 6.1a – Residential, 6.1b – Commercial, 6.1c – Industrial), 5.2 (Net-metering for Distributed Generation and Combined Heat and Power)
RCI -4	Energy Management Training/Training of Building Operators	2.8 (Energy Management Training/Training of Building Operators)
RCI -5	Incentives, Resources, and Regulatory Reform (including net-metering) to Promote Energy Recycling Including Combined Heat and Power	6.2 (Incentives, Resources, and Regulatory Reform to Promote Energy Recycling Including Combined Heat and Power), 10.5 (Industrial cooperation in sharing energy needs/utilization of waste energy), 5.2 (Net-metering for Distributed Generation and Combined Heat and Power)

Proposed Option #	Proposed Option Name	# From Catalog of State Actions
RCI -6	Expanding the investment options for electric utilities to include efficiency investment (decoupling sales from revenues)	1.5 (Expanding the investment options for electric utilities to include efficiency investment (decoupling sales from revenues))
RCI -7	Support for Energy Efficient Communities Planning, "Smart Growth"	2.4 (Support for Energy Efficient Communities Planning, "Smart Growth")
RCI -8	Training and Education for Builders and Contractors (e.g. HVAC ¹ sizing, duct sealing)	2.7 (Training and Education for Builders and Contractors (e.g. HVAC sizing, duct sealing))
RCI -9	Improved Design and Construction in new and existing state and local government buildings, "Government Lead-by-example"	2.3 (Improved Design and Construction in new and existing state and local government buildings, "Government Lead-by-example")
RCI -10	Post-secondary College and University Programs	4.4 (Post-secondary College and University Programs)
RCI -11	Green Power Purchasing for Consumers	5.1 (Green Power Purchasing for Consumers)
RCI -12	Participation in Voluntary Industry-Government Partnerships (including incentives)	9.1 (Participation in Voluntary Industry-Government Partnerships), 9.1a (Incentives for Participation in Voluntary Industry-Government Partnerships)

¹ HVAC = Heating, Ventilation, and Air Conditioning

**Table 2.
 Energy Supply Technical Work Group
 Summary List of Recommended Priority Policy Options for Analysis**

Proposed Option #	Proposed Option Name	# From Catalog of State Actions
ES-1	Clean Energy/Environmental Portfolio Standard, including renewables, energy efficiency, nuclear power, waste to energy, landfill gas, and hydro	2.13 (Environmental Portfolio Standard, including renewables, energy efficiency, and nuclear power), 6.5 (Landfill Gas Recovery (see also Waste)), 6.6 (Waste to Energy (see also Waste))
ES-2	Technology Research & Development	1.6 (Technology Research & Development), 2.8 (Technology-focused initiatives (biomass co-firing, energy storage, fuel cells, etc.), 3.5 (Technology-focused initiatives), 5.1 (CCSR incentives, requirements and/or enabling policies (administration, regulation, liability, incentives)), 5.2 (R&D for CCSR), 5.3 (State study into pumping CO2 into Blake Ridge for enhanced gas recovery), 5.4 (State study into new technologies for carbon removal)
ES-3	Renewable Energy Financing	2.10 (SC Biomass Council recommendations), 6.5 (Landfill Gas Recovery (see also Waste)), 6.6 (Waste to Energy (see also Waste))
ES-4	Decoupling of energy sales and revenues to allow investment in efficiency and renewables to be considered in parity with investment in new conventional capacity	2.9 (Decoupling of energy sales and revenues to allow investment in efficiency and renewables to be considered in parity with investment in new conventional capacity)
ES-5	New Nuclear Power	3.2 (New Nuclear Power)
ES-6	Green power purchases and marketing	2.4 (Green power purchases and marketing)
ES-7	Regulatory model to equalize utility returns on energy efficiency with returns on traditional power supply	2.14 (Regulatory model to equalize utility returns on energy efficiency with returns on traditional power supply)
ES-8	Attract renewable energy technology businesses to South Carolina	2.15 (Attract renewable energy technology businesses to South Carolina)
ES-9	Renewable Portfolio Standard (RPS)	2.1 (Renewable Portfolio Standard (RPS))

Proposed Option #	Proposed Option Name	# From Catalog of State Actions
ES-10	Distributed renewable energy incentives and/or barrier removal (Including Interconnection Rules)	2.3 (Distributed renewable energy incentives and/or barrier removal), Interconnection rules from 6.3 (General distributed generation support (interconnection rules, net metering, etc.)), 2.7 (Renewable energy development issues), 2.10b (Biomass – exemption from air regulations)

Table 3.
Transportation and Land Use Technical Work Group
Summary List of Recommended Priority Policy Options for Analysis

Proposed Option #	Proposed Option Name	# From Catalog of State Actions
TLU-1	Adopt California Clean Car Standards	1.1.1 (Tailpipe GHG Emission Standards)
TLU-2	Transportation System Management	1.2.3 (Transportation System Management)
TLU-3	Tax Credits for Efficient Vehicles	1.3.4 (Tax Credits for Efficient Vehicles)
TLU-4	Improve Development Patterns	2.1.1 (Infill, Brownfield Re-development), 2.1.2 (Transit-Oriented Development), 2.1.3 (Smart Growth Planning, Modeling, Tools)
TLU-5	Transit & Bike-Pedestrian	2.2.2 (Improve Transit Service (frequency, convenience, quality)), 2.2.3 (Transit Marketing and Promotion), 2.2.4 (Bike and Pedestrian Infrastructure), 2.2.5 (Expand Transit Infrastructure (rail, bus, BRT)), 2.2.13 (State Mass Transit Aid Program), 2.2.14 (State Mass Transit Capital Assistance Program), 2.2.15 (State Mass Transit Demonstration Program), 2.3.8 (Transit Repositioning)
TLU-6	Alternative Fuel Infrastructure	2.4.4 (Alternative Fuel Infrastructure Development)
TLU-7	Truck Anti-idling	3.2.5 (Pre-clearance at Scale Houses), 3.2.6 (Truck Stop Electrification), 3.2.7 (Implement & Enforce Anti-Idling)
TLU-8	Enforce speed limits	1.2.1 (Enforce Speed Limits (cars)) 3.2.2 (Enforce Speed Limits (trucks))
TLU-9	Make full use of CMAQ funds	2.2.1 Make full use of CMAQ funds
TLU-10	Commuter Choice	2.3.1 (“Commuter Choice”/Parking Cash Out)
TLU-11	Increased Fuel Tax (w/ use of revenue for travel alternatives)	2.3.4 (Increased Fuel Tax (w/ targeted use of revenue towards travel alternatives))
TLU-12	Low-GHG Fuel Standard	2.4.1 (Low-GHG Fuel Standard)
TLU-13	Freight Vehicle Technology Improvements	3.1.1 (Freight Vehicle Technology Improvements (e.g., aerodynamics))

**Table 4.
 Agriculture, Forestry, and Waste Management Technical Work Group
 Summary List of Recommended Priority Policy Options for Analysis**

Proposed Option #	Proposed Option Name	# From Catalog of State Actions
AFW-1	Water and Wastewater Energy Efficiency Improvements	11.1 (Energy Efficiency Improvements)
AFW-2	Advanced Recycling and Composting	9.1 (Advanced Recycling and Composting), 9.3 (Source Reduction Strategies), 9.6 (Prevent Landfilling of Unprocessed Organic Material)
AFW-3	In-State Liquid Biofuels Production	1.2 (In-State Liquid Biofuels Production), 6.2 (In-State Liquid Biofuels Production (Forestry Biomass Feedstocks))
AFW-4	Soil Carbon Management	2.1 (Manure and Nutrient Management), 2.3 (Rotational Grazing (Improve Grazing Crops and / or Management)) 3.1 (Soil Carbon Management), 4.1 (Land Use Management that Promotes Grassland Cover), 4.4 (Utilization of Currently Impaired Agricultural Lands)
AFW-5	Expanded Use of Biomass Feedstocks for Electricity, Heat, or Steam Production	1.1 (Expanded Use of Biomass Feedstocks for Electricity, Heat, or Steam Production), 6.1 (Expanded use of Forest Biomass Feedstocks for Electricity, Heat and Steam Production)
AFW-6	Forest Management for Carbon Sequestration	7.3 (Afforestation / Reforestation), 7.4 (Forest Management for Carbon Sequestration)
AFW-7	Forest Protection – Reduced Rate of Clearing and Conversion to Nonforest Cover	7.1 (Forest Protection – Reduced Clearing and Conversion to Nonforest Cover)
AFW-8	Conservation of Working Agricultural Land	4.2 (Preserve Open Space / Agricultural Land)
AFW-9	Waste-to-Energy Reclamation	9.2 (Promotion of Bioreactor Technology (Advanced Municipal Solid Waste Management Practices)), 10.2 (Methane and Biogas Energy Programs), 10.3 (Landfill Methane Energy Programs)

Table 5.
Cross-Cutting Issues Technical Work Group
Summary List of Recommended Priority Policy Options for Analysis

Proposed Option #	Proposed Option Name	# From Catalog of State Actions
CC-1	Inventories and Forecasting	CC-1 (Inventories and Forecasting)
CC-2	GHG Reporting and Registry	CC-2 (GHG Reporting); CC-3 (GHG Registry)
CC-3	Statewide GHG Reduction Goals and Targets	CC-4 (Statewide GHG Reduction Goals and Targets)
CC-4	State Government GHG Emissions (Lead-by-Example)	CC-5 (State Government GHG Emissions (Lead-by-Example))
CC-5	Comprehensive Local Government Climate Action Plans (Counties, Cities, etc.)	CC-6 (Comprehensive Local Government Climate Action Plans (Counties, Cities, etc.))
CC-6	Public Education and Outreach	CC-7 (Public Education and Outreach), CC-9 (Clearinghouse to Facilitate Investment in Climate-Related Business Opportunities)
CC-7	Tax and Cap Policies	CC-8 (Tax and Cap Policies)
CC-8	Adaptation & Vulnerability	CC-10 (Adaptation & Vulnerability)

Sample Draft Policy Option Template AFW-x Policies to Promote Ethanol Production

Policy Description

Trees, crops and other plants convert atmospheric carbon to carbohydrate or fiber stocks that can be converted to liquid fuels, such as ethanol. The use of these renewable, biological fuels can offset fossil fuel use and reduce associated net carbon dioxide emissions. Production incentives for the conversion of crops, forest sources, animal waste and other sources to ethanol through existing or new technologies can increase the level of ethanol use in future markets.

Policy Design

Goals: Several projects are being proposed in South Carolina that would result in the production of x million gallons of ethanol annually in South Carolina by 200x. Production incentives could increase this amount by x% beyond expected levels in 20xx, and x% by 20xx.

- **Timing:** Startup in 20xx and ramp up to higher levels in 20xx and 20xx, consistent with goals.
- **Parties Involved:** Suppliers of feedstocks, ethanol producers, and distributors. Associated agencies would include: xxx...
- **Other:** As needed, identify incentives that encourage the growing and supply of feedstocks and the utilization of ethanol in transportation markets across the state.

Implementation Mechanisms

TBD

Related Policies/Programs in Place

TBD

Types(s) of GHG Reductions

Net reduction in CO₂ emissions.

Estimated GHG Reductions and Costs (or Cost Savings)

TBD

- **Data Sources:** TBD
- **Quantification Methods:** Full life-cycle analysis with supply/demand equilibrium adjustments.
- **Key Assumptions:** TBD

Key Uncertainties

TBD

Additional Benefits and Costs

TBD

Feasibility Issues

TBD

Status of Group Approval

TBD

Level of Group Support

TBD

Barriers to Consensus

TBD